



# Index

- ABN 2011 349  
abnormally low  
    price 403  
    tender 120  
abnormally low tender (ALT) 120  
ABU 2011 349  
acceleration  
    constructive 46, 48, 101, 165, 167  
    directed 167  
    voluntary 173  
adjudication 104, 121, 166, 184, 199, 231, 237, 245, 254, 266, 278, 282, 306, 411  
awards 31  
contractual 245, 246  
statutory 27, 254, 255, 258  
ADR. *See* alternative dispute resolution (ADR)  
advance payment bond 374  
advance payment guarantee 374, 533  
Africa 25, 29, 71–3, 80, 157, 170, 235, 244, 245, 252, 270, 289, 390  
AIA. *See* American Institute of Architects (AIA)  
alliancing 61  
ALT. *See* abnormally low tender (ALT)  
alternative dispute resolution (ADR) 238, 241, 248, 278  
American Institute of Architects (AIA) 66  
    forms of contract 316  
analysis, managerial 13  
anti-risk measures 16  
Arbeitsgemeinschaft (ARGE) 22  
Australia 26, 36, 44, 61, 82, 98–100, 194, 197, 221, 229, 238, 245, 258, 270, 325, 380  
bank guarantee 59, 101, 330, 378, 413  
bid bond 373  
bid pricing methods 107  
bill of quantities 42, 47, 51, 54, 107, 109, 110, 115, 166, 210, 273, 277, 309, 397, 464  
BIM. *See* building information modelling (BIM)  
BIMS. *See* building information management systems (BIMS)  
BOT. *See* build-operate-transfer (BOT)  
building construction 423  
building information management systems (BIMS) 64  
building information modelling (BIM) 103, 389, 420  
build-operate-transfer (BOT) 62  
business custom 94, 97  
Central and Eastern Europe (CEE) 25, 91, 93, 232, 386, 392, 415  
change 161  
    substantial 123, 174, 421  
China 22, 149, 244  
civil engineering works 1, 73, 170, 350, 386  
civil law 24, 98, 147, 149, 151, 157, 191, 208, 214, 222, 230, 245, 270, 285, 300, 394, 399, 414  
claim  
    additional payment 32, 67, 107, 167, 173, 193, 208, 276, 285, 365  
    contractor's 30, 138, 150, 165, 185, 195, 208, 211, 215, 281, 298, 358, 364, 370, 470, 478, 487  
    delay 133, 209  
    disruption 151, 157, 169, 181, 208, 218, 223  
    employer's 157, 183, 186, 194, 227, 452, 474  
    extension of time 155, 168, 206, 326, 479  
    financial cost 216  
    global 47, 100, 206, 220, 223  
    governing law 220  
    headquarters overhead 46, 100, 212  
    increased cost 37, 217  
    interest 216  
    lapse of 32, 48, 121, 189





- claim (*cont'd*)  
lost profit 215  
as part of contract price 121  
preparation cost 217  
prescription 122  
quantification 46, 107, 113, 225, 311  
site overhead 210  
subcontractor 215, 437  
time-barred 32, 190, 196  
from variations 209
- claim management  
contractor's 224, 478  
employer's 227  
implementation 231
- CM-at-risk 51, 59, 191, 395
- common law 18, 24, 48, 93, 98, 138, 146, 149, 155, 174, 176, 183, 192, 214, 222, 230, 245, 252, 270, 285, 310, 379, 408
- condition precedent 48, 138, 183, 192, 193, 196, 198, 203, 282, 346, 492
- Conditions of Contract for Construction 7, 9, 96, 111, 118, 152, 163, 164, 185, 187, 202, 207, 209, 216, 233, 250, 251, 253, 267, 269, 273, 274, 276, 277, 283, 291, 292, 294, 298, 301, 342, 343, 358, 359, 361, 362, 364, 366, 367, 393, 394, 404, 407, 415, 434, 482, 484
- Conditions of Contract for EPC/Turnkey Projects 36, 51, 57, 66, 70, 75, 253, 267, 273, 284, 291, 298, 299, 302, 311, 343, 359, 361, 365, 383, 387, 393, 394, 436, 484
- Conditions of Contract for Plant and Design-Build (P&DB) 57, 96, 118, 152, 158, 163, 183, 195, 267, 269, 273, 275, 276, 278, 283, 284, 287–9, 291, 298, 301, 302, 343, 359, 361, 362, 364, 366, 393, 394, 404, 405, 407, 484
- CONS. *See* Conditions of Contract for Construction
- consortium 17, 19, 20, 120, 157, 187, 362, 404, 406, 413
- construction  
disputes 28, 99, 151, 220, 235  
management 51, 58, 77, 113, 311, 317, 429
- construction project  
aspects 10  
individuality 1  
infrastructure 272, 361, 386  
phases 10
- relationships 2  
roles 2
- construction subcontract  
FIDIC 285  
NEC 308
- contract  
administration 3, 4, 35, 42, 53, 74, 92, 112, 130, 235, 273, 294, 312, 318, 393, 406, 416, 419  
bespoke 69, 94, 199, 291  
construction 266, 305  
price 5, 32, 40, 52, 67, 69, 100, 106, 109, 117, 121, 211, 228, 273, 293, 320, 325, 333, 365, 379, 388, 395, 397, 404, 431
- contractor 2  
EPC 12, 66, 73, 86, 299  
EPCM 66, 77, 80  
proposal 54, 57, 276, 283, 287, 498  
risks 19, 32, 153, 190, 273, 293, 332, 359, 388, 397
- contractual penalty 28, 101, 128, 133, 152, 206, 405
- cost  
overruns 4, 63, 74, 80, 107, 119, 162, 362, 393, 418  
plus 52, 58, 77, 86, 109, 112, 121, 157, 311, 320
- Czech Republic 222, 232, 269, 348, 415
- DAB. *See* dispute adjudication board (DAB)
- DB. *See* design-build (DB)
- DBO. *See* Design, Build and Operate (DBO)
- decision  
interim-binding 249  
non-binding recommendations 249
- defects liability, statutory 25, 47
- delay  
claim 133, 209  
concurrent 28, 46, 148, 206  
damages 28, 36, 46, 128, 138, 146, 151, 155, 167, 181, 194, 206, 209, 275, 291, 405  
and disruption protocol 130, 149, 150
- delivery methods 51, 190  
extended 61
- Design, Build and Operate (DBO) 62  
FIDIC 39, 247, 274, 286, 331, 361, 383
- design responsibility 52, 59, 82, 294, 301, 308, 433



- design-build (DB) 10, 51, 54, 66, 118, 171, 190, 253, 273, 283, 299, 317, 332, 343, 360, 362, 387, 403, 429  
designer 3, 6, 10, 47, 52, 64, 73, 220, 343, 394  
developing countries 5, 72, 84, 92, 106, 181, 278, 414  
investment 386  
dispute 6, 18, 25, 28, 31, 38, 46, 48, 53, 61, 71, 75, 83, 88, 93, 96, 99, 102, 106, 110, 112, 121, 130, 133, 147, 151, 306, 313, 320, 327, 338, 362, 366, 378, 387, 389, 393, 395, 402, 411, 416, 419, 430  
avoidance 5, 175, 238, 246, 407  
dispute adjudication board (DAB) 31, 71, 121, 214, 222, 245, 250, 271, 396  
FIDIC 188, 246, 253, 282, 411  
dispute board 235  
adjudication 31, 71, 121, 214, 222, 245, 250, 271, 396  
decision enforcement 249  
under FIDIC 188, 246, 282, 411  
impartiality 249  
independence 249  
dispute resolution board (DRB) 72, 245  
disruption 45, 100, 129, 130, 150, 162, 169, 174, 181, 191, 199, 206, 214, 231, 237, 334  
claim 151, 157, 169, 181, 208, 218, 223  
down payment guarantee 374  
drawings 3, 7, 51, 52, 57, 124, 150, 207, 216, 218, 273, 276, 296, 324, 415  
DRB. *See* dispute resolution board (DRB)  
  
early contractor involvement (ECI) 63, 114, 389, 416  
EBRD. *See* European Bank for Reconstruction and Development (EBRD)  
EIB. *See* European Investment Bank (EIB)  
employer's  
    requirements 48, 51, 54, 56, 67, 72, 82, 273, 275, 284, 287, 300, 332, 340, 394, 443  
    risks 207, 291, 298, 331, 332, 396  
ENAA forms of contract 314  
engineer 5, 6, 42, 72, 75, 93, 111, 115, 152, 155, 163, 170, 183, 273, 275, 406, 454  
certification 7, 42, 135, 277, 344  
determination 7, 125, 226, 246, 248, 454, 487  
liability 10  
neutrality 42, 295  
responsibility 7, 9, 301  
restricted competencies of 393  
engineer procure construct (EPC) 12, 51, 66, 190, 242, 299, 334, 360, 363, 383  
bespoke 69  
FIDIC 36, 56, 57, 66, 70, 75, 253, 267, 273, 284, 291, 298, 299, 303, 311, 343, 359, 361, 365, 383, 387, 393, 394, 436, 484  
turnkey 70, 80, 299, 305, 313, 314, 316, 367  
engineer procure construction  
    management (EPCM) 51, 66, 77, 80, 290  
EOT. *See* extension of time (EOT)  
EPC. *See* engineer procure construct (EPC)  
EPCM. *See* engineer procure construction management (EPCM)  
European Bank for Reconstruction and Development (EBRD) 91, 186, 392, 414, 419  
European Investment Bank (EIB) 91, 186, 386, 392, 403  
European Union Funds 90  
extension of time (EOT) 5, 45, 46, 101, 128, 133, 135, 142, 146, 150, 155, 157, 164, 167, 170, 181, 187, 194, 198, 200, 204, 206, 218, 276, 295, 307, 321, 326, 335, 365, 405, 408, 434  
fast track projects 62  
FEED. *See* front end engineering design (FEED)  
FIDIC 266  
    expansion 266  
    influence 267  
    membership 267  
    networking activities 268  
FIDIC forms 272  
    in Africa 71, 157, 268, 270, 289, 391  
    in Brazil 272  
    in China 270, 294  
    design responsibility 301  
    in mining 289  
    misapplication 278  
    misuse 413  
    in Russia 186, 269, 271  
    in Southeast Asia 228, 270



- FIDIC forms (*cont'd*)  
translations 269  
in UAE 279
- final guarantee 374
- fitness for purpose 47, 67, 77, 81, 343
- float ownership 45, 133, 149
- force majeure* 13, 32, 38, 47, 48, 69, 157, 159, 202, 278, 286, 292, 295, 298, 332, 341, 364, 369, 405, 472
- front end engineering design (FEED) 72, 77
- frustration of purpose 33, 40
- general contracting 53, 118, 190, 273, 388, 394, 415
- Gold Book FIDIC 253, 274, 286, 362, 363, 383
- good faith 4, 5, 25, 28, 33, 45, 46, 48, 100, 101, 147, 192, 194, 202, 203, 243, 306, 312, 346, 393
- governing law 5, 10, 17, 20, 24, 28, 31, 38, 43, 45, 47, 57, 73, 88, 92, 94, 95, 100, 121, 124, 130, 148, 151, 156, 166, 190, 192, 195, 202, 208, 215, 217, 220, 232, 274, 292, 302, 331, 343, 370, 378, 382, 405, 481
- Green Book 274, 285, 315
- guaranteed maximum price 59, 113, 317
- hardship 33, 39
- hazard 1, 2, 14, 51, 50, 111, 162, 184, 205, 208, 247, 332
- typical 17, 331, 354
- health care facilities 423
- hospital 425
- Hungary 256
- hydropower 345, 377, 490
- ICC. *See* International Chamber of Commerce (ICC)
- ICHEM E forms of contract 314
- impossibility 40
- impracticability 41
- imprévision 36
- INCOTERMS. *See* International Commercial Terms (INCOTERMS)
- insurance 2, 14, 17, 18, 47, 56, 69, 76, 81, 101, 216, 275, 286, 330, 355, 366, 372, 378, 382, 424
- CAR 344, 349, 351
- compatibility 347
- for contractor's personnel 344
- EAR 349, 351
- FIDIC 342
- in hydroenergy projects 345
- against injury of persons and damage to property 344
- Munich 347, 351
- negotiating 346
- practical aspects 346
- standards 349
- for works and contractor's equipment 344
- intercultural aspects 228
- international business 26
- form of organisation 19
- hazard 14, 17
- motivation 11
- International Chamber of Commerce (ICC) 96, 237, 305, 313
- case 6, 50, 68, 96, 129, 150, 170, 173, 181, 184, 193, 217, 248, 250, 252
- forms of contract 313
- rules related to securities 381
- International Commercial Terms (INCOTERMS) 90
- interpretation 96
- invalid clauses 24, 28, 34, 36, 43, 89, 94, 191, 196, 319, 324, 380, 393, 412
- joint venture 2, 11, 17, 19, 21, 22, 71, 170, 238, 270, 289, 418
- lapse of claim 32, 48, 121, 189, 191, 195, 321
- lenders 2, 18, 49, 72, 90, 97, 106, 115, 128, 187, 232, 266, 299, 305, 334, 342, 345, 377, 392
- lex
- causae 95
- constructionis 90, 100
- liability
- defects 47, 95, 278, 286, 320, 377
- limitation of 31, 100, 292, 332
- liquidated damages 28, 79, 82, 100, 104, 132, 149, 155, 158, 169, 171, 188, 199, 200, 202, 204, 209, 260, 326, 334
- lump sum 18, 51, 67, 109, 112, 118, 121, 125, 273, 283, 290, 298, 311, 314, 315, 325, 336, 363, 397, 421



- maintenance bond 374  
maintenance guarantee 374  
managerial analysis 13  
milestone payments 115, 336  
mining 66, 79, 289  
multiple-prime contracts 60  
  
New Engineering Contract (NEC) 18, 35, 48, 90, 183, 270, 305, 310  
  
options 112  
orgalime forms of contract 315  
  
particular conditions 56, 68, 71, 74, 95, 118, 148, 151, 216, 223, 274, 295, 301, 343, 354, 364, 383, 397, 402, 404, 413, 462  
partnering 60  
payment  
    bond 374  
    guarantee 374  
PCSA. *See* preconstruction services  
    agreement (PCSA)  
P&DB 57, 96, 118, 152, 158, 163, 183, 195, 267, 269, 273, 275, 276, 278, 283, 284, 287–9, 291, 298, 301, 302, 343, 359, 361, 362, 364, 366, 393, 394, 404, 405, 407, 484  
performance  
    bond 374  
    guarantee 374  
    release from 370  
    responsibility 47  
Poland 21, 95, 123, 148, 196, 230, 232, 238, 269, 363, 372, 378, 379, 399, 402–4, 408, 411, 412  
PPP. *See* public and private partnership (PPP)  
preconstruction services agreement (PCSA) 63  
price 2, 5, 15, 18, 32, 36, 42, 46, 51, 52, 55, 61, 62, 66, 68, 74, 78, 86, 92, 95, 100, 106, 107, 128, 137, 148, 157, 205, 208, 209, 232, 238, 272, 273, 309, 320, 324, 333, 337, 387  
determination 109  
economic influences on 37, 109, 119, 293, 295, 362  
under FIDIC forms 117  
target 113  
proactivity 101  
  
progress payments 114, 258, 260  
project finance 74, 107, 334, 345, 377  
provisional sum 110, 118, 275, 466  
public and private partnership (PPP) 62, 287  
public procurement law 54, 93, 122, 161, 174, 232, 368, 393, 400, 406, 409, 416, 420  
reasonable skill 47  
Red Book 315  
FIDIC 7, 72, 75, 96, 111, 149, 163, 185, 187, 193, 202, 209, 216, 233, 246, 250, 253, 266, 271, 273, 277, 279, 290, 294, 342, 358, 362, 367, 377, 391, 393–5, 404, 407, 415, 420, 434, 484  
regulators 3, 392  
re-measurement 6, 52, 54, 109, 110, 115, 118, 121, 277, 311, 325, 362, 416, 420  
representative office 19  
retention bond 375  
retention guarantee 375  
risk  
    allocation 11, 18, 24, 32, 40, 52, 53, 59, 66, 71, 89, 92, 97, 110, 112, 121, 183, 190, 238, 273, 278, 286, 288, 291, 295, 298, 310, 321, 331, 338, 356, 359, 365, 387, 389, 392, 404, 413, 419, 433, 484  
analysis 15  
design 190, 298, 303, 340, 343  
execution 341, 342  
management 2, 16, 18, 268, 331, 337, 355  
post-construction 342  
project preparation 340  
site 341  
uncontrollable 32  
in underground 354  
unforeseeable 32  
Romania 95, 232, 269, 395, 415  
Russia 11, 186, 269, 271  
  
sanctions, contractual 250  
scheme for construction projects 255  
SCL Protocol 130  
security under FIDIC Forms 383  
Serbia 232  
sharia 25, 48  
short form of contract FIDIC 274, 285  
Silver Book FIDIC 36, 56, 57, 66, 70, 75, 253, 267, 273, 284, 299, 311, 343, 359, 361, 365, 383, 387, 393, 394, 436, 484

- site data 71, 191, 294, 359, 394  
 South Africa 26, 29, 170, 235, 270, 289, 390  
 Southeast Asia 228, 270  
 specifications 3, 51, 83, 124, 235, 239, 273, 277, 301, 319, 324, 342, 368, 392, 397, 401, 415, 462  
 standard form of contract 92  
 standard sample forms 94  
 standardisation 88  
 stand-by letter of credit 382  
 subsidiary  
     domestic 19  
     foreign 19  
 substantial completion 29, 93, 198  
 sufficiency of the accepted contract  
     amount 364  
 suretyship 381  
 suspension 26, 188, 191, 212, 216, 233, 253, 278, 286, 296, 321, 325, 335  
 contractor 156  
 employer 156  
 under FIDIC 154  
 taking-over 5, 29, 69, 95, 163, 191, 226, 280, 286, 293, 321, 344, 376, 377, 406  
 target price 113  
 taxation 17, 84, 115  
 tender guarantee 373  
 termination 21, 28, 34, 37, 38, 53, 95, 121, 171, 191, 207, 220, 253, 280, 321, 335, 377, 387, 395, 406, 413  
 contractor 158  
 in convenience 43, 44, 159  
 employer 158  
 under FIDIC 154, 158, 281  
 force majeure 160, 370  
 time  
     bar 32, 189  
     for completion 7, 15, 25, 45, 69, 78, 101, 108, 119, 124, 128, 135, 146, 151, 162, 173, 182, 205, 206, 275, 288, 293, 321, 325, 335, 337, 340, 346, 359, 404, 408  
     extension of 5, 45, 46, 101, 128, 133, 135, 142, 146, 150, 155, 157, 164, 167, 170, 181, 187, 194, 198, 200, 204, 206, 218, 276, 295, 307, 321, 326, 335, 365, 405, 408, 434  
     at large 46, 101, 138, 146, 169, 408  
     related issues 45  
 time programme 36, 115, 130, 131, 148, 152, 206, 226, 300, 348, 389, 405  
     under FIDIC forms 152  
 trade usage 97, 381  
 tunnel works 74, 119, 186, 232, 347, 354, 419  
     code of practice for risk management 355  
 UAE. *See United Arab Emirates (UAE)*  
 underground 4, 100, 190, 290, 323, 340, 347, 354, 405, 426  
 unforeseeability 357  
     FIDIC 358  
 unforeseeable  
     forces of nature 366  
     physical conditions 95, 100, 161, 181, 191, 207, 292, 298, 356, 361, 364, 394, 405, 443, 470, 484  
     unification 88  
 United Arab Emirates (UAE) 37, 194, 245, 278  
 vadium 373  
 variation  
     admissibility 11, 100, 102  
     clause 102, 121, 123, 161, 176  
     constructive 165  
     directed 100, 123, 164  
     under FIDIC Forms 163  
     management 10, 11, 107, 131, 161  
     voluntary 166  
 VOB 270, 318, 349, 386  
 warranty guarantee 374  
 weaker party protection 5, 38, 183  
 World Bank (WB) 92, 237, 267, 270, 314, 386, 393, 414, 419  
 Yellow Book FIDIC 57, 71, 75, 96, 118, 133, 141, 152, 163, 253, 258, 267, 273, 283, 289, 290, 299, 300, 315, 343, 359, 362, 364, 377, 386, 391, 393, 394, 397, 403, 404, 407, 484